IN THE CLAIMS:

Please cancel originally filed claim 1, and add new claims 14-26 as follows:

1-13. (Canceled).

14. (New) A data signal, embodied in a carrier wave generated by a wireless telephony apparatus, comprising:

data that has been encoded by a Turbo encoder including a plurality of constituent encoders, each adapted to encode data using a convolutional code,

wherein at least one of the plurality of constituent encoders has a transfer function of:

$G(D) = [1, (1+D+D^3) / (1+D^2+D^3)]$, wherein D denotes unit delay in presentation of data bits to the encoder.

15. (New) The data signal of claim 14, wherein the data has been encoded using the Turbo encoder with a coding rate equal to 1/3.

16. (New) A data signal, embodied in a carrier wave generated by a wireless telephony apparatus, comprising:

data that has been encoded by a Turbo encoder including a plurality of constituent encoders, each adapted to encode data using a convolutional code,

wherein at least one of the plurality of constituent encoders has a transfer function of:

$G(D) = [1, (1+D+D^3) / d(D)]$, wherein D denotes unit delay in presentation of data bits to the encoder.

17. (New) The data signal of claim 16, wherein $d(D) = (1+D^2+D^3)$.

18.   (New) The data signal of claim 16, wherein the data has been encoded using the Turbo encoder with a coding rate equal to 1/3.

19.   (New) A data signal, embodied in a carrier wave generated by a wireless telephony apparatus, comprising:

data that has been encoded by a Turbo encoder including a plurality of constituent encoders, each adapted to encode data with a convolutional code,

wherein at least one of the plurality of constituent encoders has a transfer function of:

$G(D) = [1, (1+D+D^3) / (1+D^2+D^3), (1+D+D^2+D^3) / (1+D^2+D^3)]$, wherein D denotes unit delay in presentation of data bits to the encoder.

20.   (New) The data signal of claim 19, wherein the data has been encoded using the Turbo encoder with the data rate equal to 1/2.

21.   (New) The data signal of claim 19, wherein the data has been encoded using the Turbo encoder with the data rate equal to 1/3.

22.   (New) The data signal of claim 19, wherein the data has been encoded using the Turbo encoder with a coding rate equal to 1/4.

23.   (New) A data signal, embodied in a carrier wave generated by a wireless telephony apparatus, comprising:

data that has been encoded by a Turbo encoder including a plurality of constituent encoders, each encoder adapted to encode data with a convolutional code,

wherein at least one of the plurality of constituent encoders ha a transfer function of:

$G(D) = [1, n_x(D)/d(D), n_y(D)/d(D)]$, wherein n_x and n_y are polynomials specifying feed forward connections and $d(D) = (1+D^2+D^3)$; wherein D denotes unit delay in presentation of data bits to the encoder.

24.　(New) The data signal of claim 23, wherein the data has been encoded using the Turbo encoder with a coding rate equal to 1/2.

25.　(New) The data signal of claim 23, wherein the data has been encoded using the Turbo encoder with a coding rate equal to 1/3.

26.　(New) The data signal of claim 23, wherein the data has been encoded using the Turbo encoder with a coding rate equal to 1/4.